

On the Genera *Mononchus* Bastian, 1865 and *Prionchulus* (Cobb, 1916) Wu & Hoeppli, 1929 (Nematoda: Mononchidae)

By

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Abstract. The nematode genera *Mononchus* BASTIAN, 1865 and *Prionchulus* (COBB, 1916) WU & HOEPLI, 1929 are discussed and their species enumerated. *Mononchus bellus* and *Prionchulus auritus* n. spp. are described as new to science. Keys to the species of both genera are added.

In this paper I give the descriptions of two new species of the nematode family Mononchidae, and, by seizing the opportunity, I present some pictures on the genera *Mononchus* BASTIAN, 1865 and *Prionchulus* (COBB, 1916) WU & HOEPLI, 1929.

Genus *Mononchus* BASTIAN, 1865

Mononchidae, Mononchinae. Body varying in length from 0.9 to 5.6 mm. Buccal cavity oblong, oval, armed with a large dorsal tooth lying in the anterior third of the mouth cavity and pointing forward. Opposite to the tooth a fine transverse rib on each subventral walls is present. Proximal end of oesophagus simple, non-tuberculate. Female gonads paired; vulva situated in the mid-body region. Males described for most species, with 10–40 ventral supplementary organs. Tails of both sexes similar, more or less elongated. Caudal glands well developed and opening terminally.

Predominantly aquatic animals; predators, devouring their preys in toto.

Type-species: *Mononchus truncatus* BASTIAN, 1865.

Eleven species may be listed here:

M. aquaticus COETZEE, 1968

Syn. *Mononchus macrostoma* apud MEYL, 1955

Mononchus longicaudatus apud WILLIAMS, 1958

Mononchus truncatus apud MULVEY, 1967, partim: "small female"

Mononchus truncatus apud MULVEY & JENSEN, 1967

Mononchus sinensis SONI & NAMA, 1983

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M. bellus n. sp.

Syn. *Mononchus truncatus* apud COETZEE, 1968

M. clarki ALTHERR & DELAMARE DEBOUTTEVILLE, 1972

M. italicus ANDRÁSSY, 1959

Syn. *Clarkus italicus* (ANDRÁSSY, 1959) JAIRAJPURI, 1970

M. maduei SCHNEIDER, 1925*

M. mulveyi n. nom.

Syn. *Mononchus maduei* apud MULVEY, 1978

M. niddensis SKWARRA, 1921

M. scutarius EROSHENKO, 1972

M. superbus MULVEY, 1978

M. truncatus BASTIAN, 1865

Syn. *Mononchus macrostoma* BASTIAN, 1865

Mononchus longicaudatus COBB, 1893

Mononchus macrostoma var. *longicaudata* COBB, 1893 (MICOLETZKY, 1922)

Mononchus macrostoma var. *armata* DADAY, 1897

Mononchus dadayi MICOLETZKY, 1914

Iotonchus dadayi (MICOLETZKY, 1914) ALTHERR, 1960

Miconchus dadayi (MICOLETZKY, 1914) MULVEY, 1962

Mononchus tenuicaudatus STEFANSKI, 1914

Mononchus megalaimus COBB, 1917

Mononchus brevicavatus KREIS, 1924

Mononchus fusiformis EROSHENKO, 1972

M. tunbridgensis BASTIAN, 1865

The following taxa must be regarded as species inquirendae:

M. allgeni MEYL, 1957

Syn. *Mononchus* sp. apud ALLGÉN, 1933

M. macrostoma var. *filicaudata* SCHNEIDER, 1937

M. macrostoma var. *pseudoparva* MICOLETZKY, 1922

M. obtusus COBB, 1917

The genus *Mononchus* is distributed over the world except the Antarctic. Europe is represented by 7 species, Asia by 4, Africa by 3, North America by 7, Central and South America by 5 and Australia by 2 species. The most common species is *M. truncatus*: it has been recorded from 39 countries or states hitherto. It is followed by *M. tunbridgensis* (from 14 countries or states) and *M. aquaticus* (from 11 countries or states). Five of the species have not been found since their first description.

Comments

Mononchus aquaticus. — Although this species was described by COETZEE in 1968 we may be convinced that some former data in the literature also referred to it; thus, "*M. macrostoma*" of MEYL (1955), "*M. longicaudatus*" of WILLIAMS (1958), the "small female" of *M. truncatus* drawn by MULVEY (1967, Figs. 18 and

* The recently described *Mononchus angarensis* GAGARIN, 1984 is very similar to *M. maduei* (the same species?).

20), and "*M. truncatus*" of MULVEY and JENSEN (1967). *Mononchus aquaticus* can be distinguished from its sister species, *M. truncatus*, by the smaller buccal cavity ($27-31 \times 13-16 \mu\text{m}$: $45-50 \times 18-22 \mu\text{m}$) and the apex of the dorsal tooth situated more anteriorly (in $19-23\%$: $22-28\%$).

Mononchus bellus. — The "*M. truncatus*" mentioned by COETZEE in 1968 is identical with *M. bellus*.

Mononchus clarki. — This short-tailed species is unique within the genus in having a subterminal-subdorsal opening for the caudal glands. In other respects, including the structure of the mouth cavity, it is a true *Mononchus*.

Mononchus italicus. — This interesting species was described by me from Italy (ANDRÁSSY, 1959). Since it had a very short tail, JAIRAJPURI (1970) transferred it in the genus *Clarkus*. I cannot agree with him: the shape and structure of the buccal cavity are different from those of *Clarkus* and wholly correspond for the characteristics of *Mononchus*. The single feature by which *M. italicus* differs from every other representative of the latter genus is the opisthodelphy of genital apparatus of the female. Unfortunately, I described this species on the basis of a single female (and a juvenile) and could not decide with certainty whether monodelphy was an individual extraordinary feature or a constant specific character.

Mononchus mulveyi. — MULVEY (1978) described a species from Canada under the name "*Mononchus maduei*" which, however, distinctly differs in the shape of the tail from that. While *M. maduei* has a short and plump tail hardly narrowing to its tip and broadly rounded, the tail of the Canadian species is longer, bent ventrally and finger-like in its posterior third. MULVEY's specimens represent in my opinion a distinct species for which I propose the name *M. mulveyi*.

Mononchus scutarius. — Maybe that it is identical with *M. truncatus*. In the measurements, length of the mouth cavity ($44 \mu\text{m}$) and position of the apex of the dorsal tooth (20%) it agrees well with *truncatus* but the labial papillae seem to be smaller and the vulval lips somewhat more protruding.

Key to the species of *Mononchus*

- 1 Body large, females $2.7-5.6 \text{ mm}$ 2
- Body smaller, females $0.9-2.2 \text{ mm}$ 5
- 2 Tail short, $2.5-3$ times anal body diameter ($c = 15-20$); males with $22-26$ supplements 3
- Tail longer, $4-5$ times anal body diameter ($c = 12-15$); males with $33-40$ supplements 4
- 3 Tail terminus in both sexes digitiform, ventrally bent. — ♀ : $L = 2.8-3.4 \text{ mm}$; $a = 35-44$; $b = 2.8-3.3$; $c = 16-20$; $V = 50-60\%$ ♂ : $L = 2.7-3.0 \text{ mm}$; $a = 30-33$; $b = 3.1-3.3$; $c = 20-23$. (Canada.) *mulveyi* n. nom.
- Tail terminus in both sexes plump, broadly rounded, tail straight. — ♀ : $L = 3.5-3.7 \text{ mm}$; $a = 24-29$; $b = 4.0-4.4$; $c = 18-20$; $V = 55-59\%$. ♂ : $L = 3.6 \text{ mm}$; $a = 28$; $b = 4.2$; $c = 27$. (Federal Republic of Germany.) *maduei* SCHNEIDER

- 4 Body very long, 5 mm or more; apex of dorsal tooth in 23–24% of the buccal cavity; female tail about 400 μ m long. — ♀: L = 5.0–5.6 mm; a = 44–47; b = 3.8–4.5; c = 13; V = 51–53%. ♂: L = 4.5–6.0 mm; a = 39–46; b = 4.0–4.6; c = 19–24. (Canada.) **superbus** MULVEY
- Body 3.5 mm or shorter; apex of dorsal tooth in 12–17% of the buccal cavity; female tail about 200 μ m long. — ♀: L = 2.7–3.5 mm; a = 32–43; b = 3.8–4.2; c = 12–15; V = 51–54%. ♂: L = 3.1 mm; a = 36; b = 3.7; c = 17. (Federal Republic of Germany, Czechoslovakia, Poland, Denmark, Soviet Union [Russia], Canada.) **niddensis** SKWARBA
- 5 Female monodelphic, ovary posterior to vulva; tail short and plump. — ♀: L = 1.1 mm; a = 28; b = 3.7; c = 15; V = 54%. ♂ unknown. (Italy.) **italicus** ANDRÁSSY
- Female didelphic; tail generally long, exceptionally short 6
- 6 Tail very short, 1.5 times anal body diameter, bluntly rounded; spinneret of caudal glands subdorsal. — ♀: L = 1.8 mm; a = 25; b = 3.5; c = 33; V = 59–60%. ♂ unknown. (United States [Massachusetts].) **clarki** ALTHERR & DELAMARE DEBOUTTEVILLE
- Tail elongated, 5 to 12 times anal body diameter; spinneret of caudal glands terminal 7
- 7 Buccal cavity small, 18–20 μ m long, its walls nearly straight; apex of dorsal tooth close to the beginning of the buccal cavity; body short, about 1 mm. — ♀: L = 0.9–1.2 mm; a = 20–31; b = 4.2–5.0; c = 8.3–10.3; V = 51–55%. ♂ unknown. (Holland, England, Switzerland, Czechoslovakia, Soviet Union [Russia, Georgia], India, Japan, South Africa, Canada, United States [Alabama, Virginia], Surinam, Australia.) **tunbridgensis** BASTIAN
- Buccal cavity 27 to 50 μ m long, its walls concave; apex of dorsal tooth in 20–30% of the buccal cavity; body longer than 1 mm 8
- 8 Vulval lips protruding. — ♀: L = 2.2 mm; a = 31; b = 3.7; c = 9.2; V = 58%. ♂ unknown. (Soviet Union [Far East].) **scutarius** EROSHENKO
- Vulval lips simple, not protruding 9
- 9 Apex of dorsal tooth in 30–33% of buccal cavity; subventral ridges anterior to tooth apex. — ♀: L = 1.5–1.8 mm; a = 28–34; b = 3.5–4.2; c = 6.1–8.4; V = 51–56%. ♂ unknown. (Hungary, South Africa, Puerto Rico, Argentina.) **bellus** n. sp.
- Apex of dorsal tooth further forward; subventral ridges level with tooth apex or, mostly, posterior to that. 10
- 10 Buccal cavity 45–50 \times 18–22 μ m, tooth apex in 22–28%; female tail 250–280 μ m long. — ♀: L = 1.6–2.1 mm; a = 26–40; b = 3.4–4.3; c = 6.4–8.6; V = 48–55%. ♂: L = 1.7–2.2 mm; a = 32–46; b = 3.9–4.1; c = 8.9–10. (Europe: Holland, Federal Republic of Germany, Democratic

Republic of Germany, Switzerland, Austria, Czechoslovakia, Hungary, Poland, Denmark, England, Ireland, Finland, Spain, France, Yugoslavia, Italy, Soviet Union [Russia, Belorussia, Georgia, Kirghizia, Uzbekistan, Tadzhikistan]; Asia: Mongolia, Nepal, Japan, Sumatra; Africa: Ivory Coast, Ghana, Mauritius, Uganda, Zaire, Kenya, South Africa; Americas: Canada, United States [Hawaii], Mexico, Columbia, Venezuela, Peru; Australia.) . . .

truncatus BASTIAN

- Buccal cavity $27-31 \times 13-16 \mu\text{m}$, tooth apex in $19-23\%$; female tail $94-160 \mu\text{m}$ long. – ♀: L = $1.2-2.0 \text{ mm}$; a = $19-37$; b = $4-5$; c = $8-12$; V = $46-59\%$. ♂: L = $1.7-2.0 \text{ mm}$; a = $26-32$; b = $4.3-4.9$; c = $11-26$. (Hungary, Great Britain, Italy, Soviet Union [Russia, Kirghizia], India, Nigeria, Mauritius, South Africa, Mexico, St. Lucia.) . . .

aquaticus COETZEE

Mononchus bellus n. sp.

(Figs. 1 A–D and 2 A)

Specimens from Puerto Rico, ♀: L = $1.58-1.61 \text{ mm}$; a = $29-34$; b = $3.5-4.0$; c = $6.1-6.8$; V = $54-56\%$; c' = $7.8-8.2$.

Specimens from Argentina, ♀: L = $1.54-1.62 \text{ mm}$; a = $30-31$; b = $3.9-4.0$; c = $6.8-7.0$; V = $51-53\%$; c' = 6.7 .

Specimens from Hungary, ♀: L = $1.60-1.79 \text{ mm}$; a = $28-30$; b = $4.0-4.2$; c = $6.8-8.4$; V = $53-54\%$; c' = $6-8$.

Body slender, $50-63 \mu\text{m}$ wide. Cuticle smooth, very thin, $1.5-2 \mu\text{m}$. Head not set off, $24-26 \mu\text{m}$ wide, lips and papillae moderately protruding. Body at posterior end of oesophagus $1.9-2.2$ times as wide as head. Amphids caliciform, level with the beginning of stoma or somewhat posterior to it but always well before the dorsal tooth.

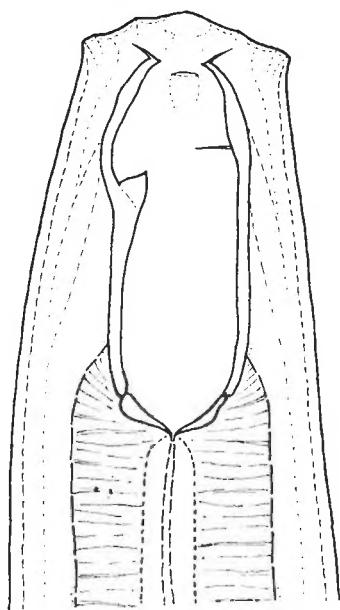
Buccal cavity elongated-oval, $40-47 \times 18-21 \mu\text{m}$, with nearly parallel walls, about $1/10$ of oesophagus length. Dorsal tooth strong with apex lying in $30-33\%$ of the mouth cavity. Subventral ridges fine but distinct, anterior to tooth apex. Oesophagus cylindrical, $380-430 \mu\text{m}$ long, mostly somewhat shorter than the distance between the posterior oesophagus end and the vulva. Oesophago-intestinal junction not tuberculate. Intestine with large penta- or hexagonal cells and thick intima. Rectum about as long as anal body diameter. In the intestine small nematodes incorporated in toto may be often observed.

Vulval lips small, cuticularized. Vagina $1/3$ as long as corresponding body diameter. Gonads paired; the anterior of them $2.5-2.8$ times, the posterior $2.8-3.2$ times as long as body diameter. Distance between vulva and anus $1.7-2.6$ times as long as tail. Egg smooth-shelled, $74-82 \times 48-50 \mu\text{m}$.

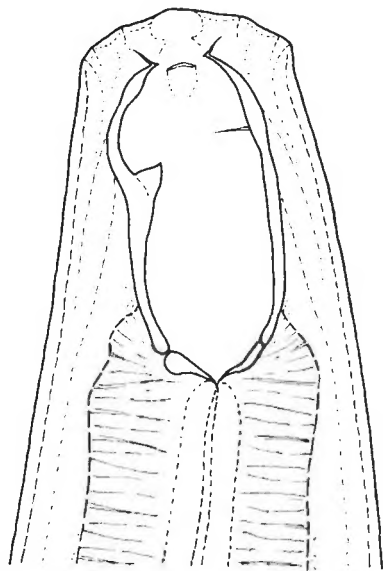
Tail $220-258 \mu\text{m}$ long, $6-8.2$ times as long as anal body diameter, nearly cylindrical, $6-6.5 \mu\text{m}$ wide in its thinnest part and $8 \mu\text{m}$ wide at the terminus. Caudal glands well developed, spinneret terminal. Tail, just before its posterior end, with two very small papillae.

Male unknown.

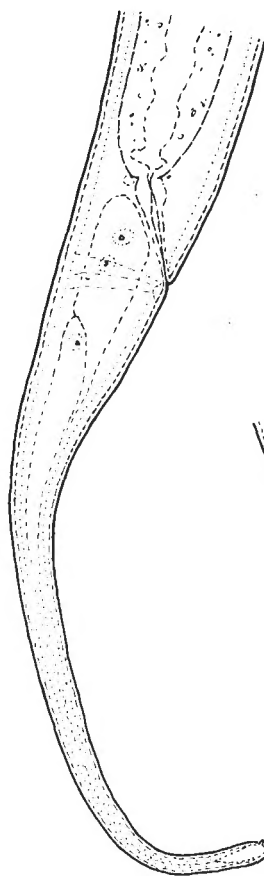
Brief characteristics: A medium-sized *Mononchus* species with a large buccal cavity, tooth apex situated comparatively far from the beginning of stoma, ventral ridges lying before tooth apex, and with long tail.



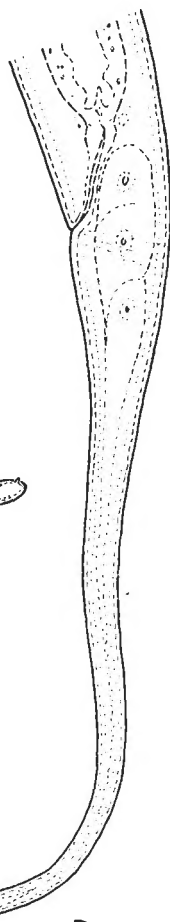
A



B

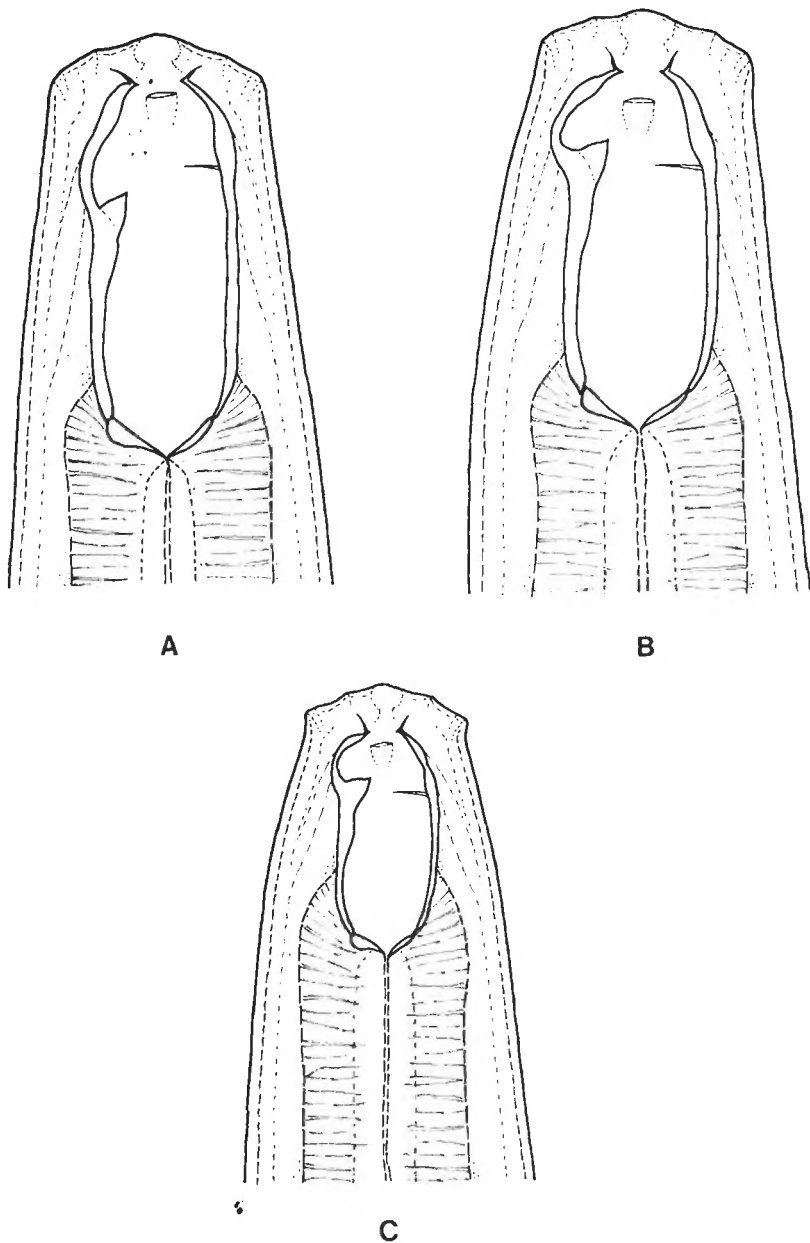


C



D

Figs. 1 A–D. *Mononchus bellus* n. sp. A: anterior end of a specimen from San Juan, Puerto Rico (1000 \times); B: anterior end of a specimen from Ezeiza, Argentina (1000 \times); C–D: female tails (400 \times)



Figs. 2 A–C. Anterior ends of three closely related species of *Mononchus*. A: *M. bellus* n. sp. from San Juan, Puerto Rico (1000 \times); B: *M. truncatus* BASTIAN, 1865 from the Lake Chungará, Chile (1000 \times); C: *M. aquaticus* COETZEE, 1968 from Poroszló, Hungary (1000 \times)

Holotype: ♀ on the slide No. Ca — 48 in the collection of the author.

Type locality: San Juan in Puerto Rico, detritus from a rivulet, June 1979.

This new species is so closely related to *Mononchus truncatus* BASTIAN, 1865 and *M. aquaticus* COETZEE, 1968 that they three form a definite group within the genus. They can be separated each from the other by the position of the apex of dorsal tooth and the level of subventral transverse ribs in the buccal cavity. *Mononchus bellus* n. sp. is characterized among them in having the most posterior position of the tooth apex: in 30–33% of mouth cavity (in 22–28% at *truncatus* and in 19–23% at *aquaticus*); at the same time, the subventral ribs are always situated somewhat before this apex. Besides, *M. bellus* can be distinguished by the much larger buccal cavity from *M. aquaticus* ($40-47 \times 18-21 \mu\text{m}$ versus $27-31 \times 13-16 \mu\text{m}$).

I have further specimens of *M. bellus* in my collection: Ezeiza, Prov. Buenos Aires in Argentina, algae from a pool, December 1961; Gyöngyössolymos in Hungary, Tarna Creek, mosses from the water, June 1975. It must be noted that also the specimens described by COETZEE as "*M. truncatus*" from South Africa (1968, p. 74, Fig. 5 A–B) probably belong to *M. bellus*. The species is distributed according to recent knowledge in Europe (Hungary), Africa (Union of South Africa), Central and South America (Puerto Rico, Argentina).

Genus *Prionchulus* (COBB, 1916) WU & HOEPPLI, 1929

Mononchidae, Prionchulinae. Length of body varying between 1.1 and 4.0 mm. Buccal cavity 1.5–2 times as long as wide, barrel shaped. Dorsal tooth large, in anterior third of the mouth cavity, with apex directed forward; opposed by two longitudinal ribs armed with saw-like denticles, 8–20 on each. Oesophago-intestinal junction non-tuberculate. Female gonads paired, vulva post-equatorial. Males known for most species; preanal supplementary organs 16–30 in number. Tails of both sexes similar, conoid, arcuate, without caudal glands and terminal opening.

Terrestrial nematodes, predominantly in mosses; predators.

Type-species: *Oncholaimus muscorum* DUJARDIN, 1845 = *Prionchulus muscorum* (DUJARDIN, 1845) WU & HOEPPLI, 1929.

Six species may be ordered here:

P. auritus n. sp.

P. longus (THORNE, 1929) ANDRÁSSY, 1958

Syn. *Mononchus longus* THORNE, 1929

Mononchus (*Prionchulus*) *longus* THORNE, 1929 (GOODEY, 1951)

P. muscorum (DUJARDIN, 1845) WU & HOEPPLI, 1929

Syn. *Oncholaimus muscorum* DUJARDIN, 1845

Mononchus muscorum (DUJARDIN, 1845) BASTIAN, 1865

Mononchus (*Prionchulus*) *muscorum* (DUJARDIN, 1845) BASTIAN, 1865 (COBB, 1916)

Mononchus bastiani DE MAN, 1876

Mononchus clenodentatus TYSOWSKI, 1915

Prionchulus medius EROSHENKO, 1975

P. punctatus (COBB, 1917) CLARK, 1960

Syn. *Mononchus* (*Prionchulus*) *punctatus* COBB, 1917

Mononchus papillatus apud BRAKENHOFF, 1913

P. spectabilis (DITLEVSEN, 1912) ANDRÁSSY, 1958

Syn. *Mononchus spectabilis* DITLEVSEN, 1912

Mononchus (*Prionchulus*) *spectabilis* DITLEVSEN, 1912 (COBB, 1916)

P. vescus EROSHENKO, 1975

The genus *Prionchulus* is distributed in every continent except the Antarctic; 4 species occur in Europe, 4 in Asia, 1 in Africa, 3 in North America, 1 in South America and 1 in Australia. The most frequent species is *P. muscorum* having been reported from 28 countries or states. It is followed by *P. punctatus* occurring in 10 countries. Three of the six species are known from a single country.

Comments

Prionchulus longus and *P. spectabilis*. — The female genital organ of these species is somewhat atypical. While in the other species the gonads are short, the oviducts join immediately to the uterus, there is no spermatheca, and the ovaries are at least half as long as the corresponding branch of the gonad (Type I), in both species mentioned above the gonads are long, the oviducts join by sphincters to the uterus, there are well-developed spermathecae, and the ovaries are shorter than half the length of the corresponding branch of the gonads (Type II). *Prionchulus longus* and *spectabilis* are very closely related, perhaps identical species.

Prionchulus medius. — I propose *P. medius* EROSHENKO, 1975 to be a new synonym of *P. muscorum*. After the description and figures *P. medius* cannot be separated from the type species of the genus.

Prionchulus thiocrenobius. — PAX and Soós (1943) described from sulphur springs in Germany a species under the name *Mononchus* (*Prionchulus*) *thiocrenobius* which I transferred (1958) to the genus *Prionchulus*: *P. thiocrenobius* (PAX & Soós, 1943) ANDRÁSSY, 1958. The subsequent authors, MULVEY as well (1967), accepted this proposition. My recent opinion is, however, that *thiocrenobius* is not a true *Prionchulus*. Owing to the following characteristics it differs from every species of the genus: 1) the subventral denticles are exceedingly small and arranged in a special way: they are grouped in two very short rows and situated far forward; 2) the tail is not of the usual conical, ventrally curved type but elongated and provided with caudal glands and spinneret; 3) the vulva is situated more anteriorly (47%) than in the "true" *Prionchulus* species (54–69%). On the ground of these "aberrant peculiarities" I prefer to take out *thiocrenobius* from the genus *Prionchulus* and regard it as a "species incertae sedis". It seems not quite impossible that the species of PAX and Soós is congeneric either with the species of *Mononchus* or with those of *Paramononchus*.

Key to the species of *Prionchulus*

- 1 Female gonads of type II: long, with elongated uterus, muscular sphincter between oviduct and uterus, separate spermathecae and short ovaries 2
- Female gonads of type I: short and stout, with short uterus and comparatively long ovaries but without sphincter and spermatheca 3

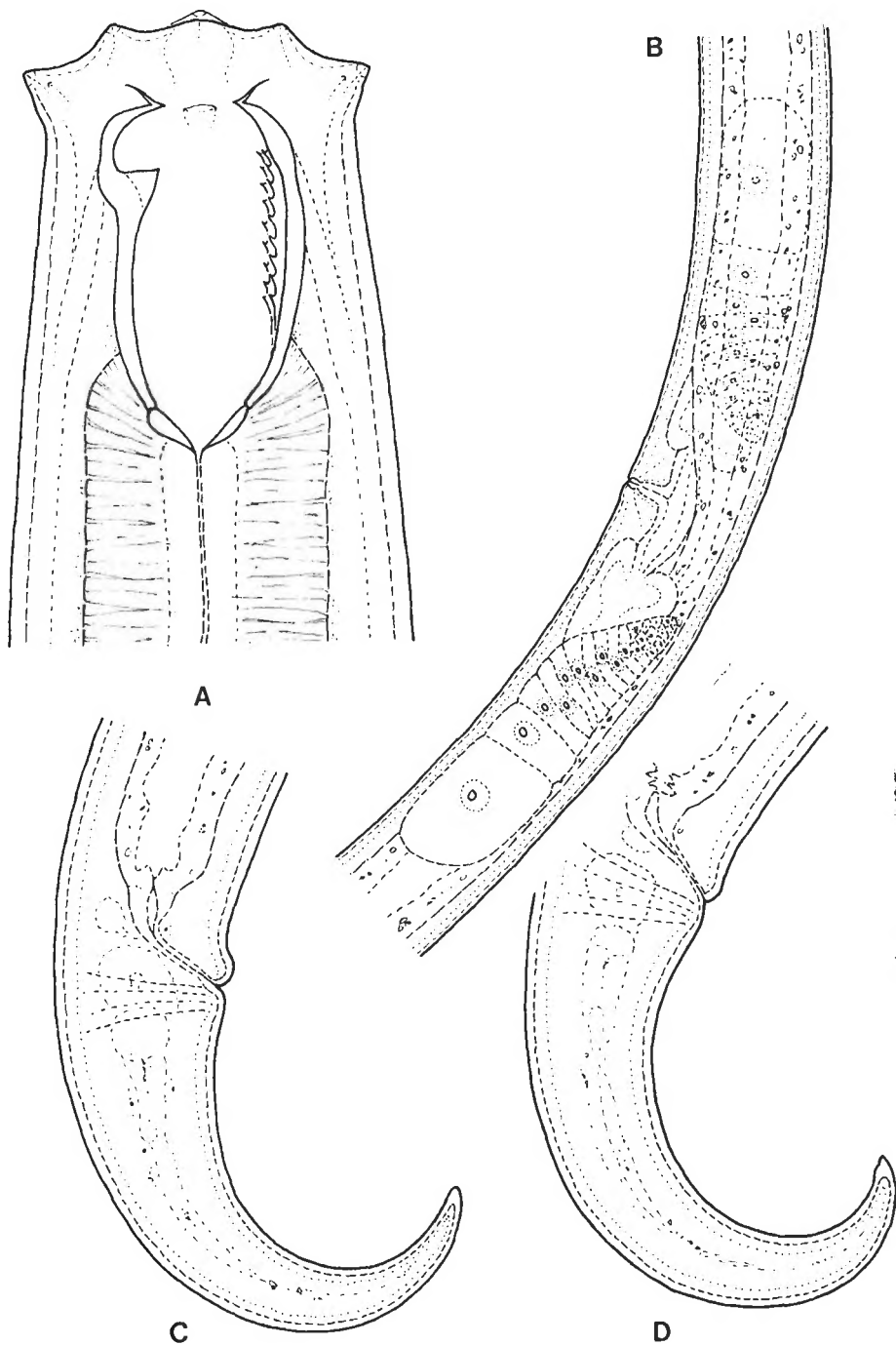
- 2 Tail comparatively longer ($c = 14-22$), vulva in 61–69% of body length.
 — ♀: $L = 2.1-3.1$ mm; $a = 24-31$; $b = 3.8-4.6$; $c = 14-22$; $V = 61-69\%$. ♂: $L = 2.0-2.9$ mm; $a = 23-27$; $b = 4.1-4.5$; $c = 20-27$.
 (Italy, Canada, United States [Colorado].)
longus (THORNE)
- Tail comparatively shorter ($c = 24-31$), vulva in 54–57% of body length.
 — ♀: $L = 2.5-4.0$ mm; $a = 31-35$; $b = 4.6-5.0$; $c = 24-31$; $V = 54-57\%$. ♂: $L = 2.2-4.0$ mm; $a = 45-47$; $b = 4.6-4.9$; $c = 35-46$.
 (Federal Republic of Germany, Switzerland, Hungary, Denmark, Greenland, Sweden, Finland.)
spectabilis (DITLEVSEN)
- 3 Labial papillae conoid, protruding, the posterior ones especially prominent, ear-like. — ♀: $L = 2.2-2.4$ mm; $a = 30-32$; $b = 4.0-4.2$; $c = 13-14$; $V = 59-62\%$. ♂ unknown. (Sri Lanka.)
auritus n. sp.
- Labial papillae more rounded, never so prominent or ear-like 4
- 4 Smaller species, under 1.5 mm; spicules about 60 μ m long. — ♀: $L = 1.1-1.3$ mm; $a = 17-22$; $b = 3.1-3.7$; $c = 12-15$; $V = 61-69\%$. ♂: $L = 1.2$ mm; $a = 18$; $b = 3.5$; $c = 16$. (Soviet Union [Far East].)
vescus EROSHENKO
- Larger species, 1.5 to 2.5 mm; spicules 85–90 μ m long 5
- 5 Egg shell echinulate; tooth apex in 15–20% of buccal cavity. — ♀: $L = 1.5-2.2$ mm; $a = 27-39$; $b = 3.6-4.8$; $c = 12-18$; $V = 59-67\%$. ♂: $L = 2.0-2.4$ mm; $a = 32-34$; $b = 3.7-4.5$; $c = 20-25$. (Holland, Belgium, Federal Republic of Germany, Switzerland, Great Britain, France, Nepal, Canada, United States, Mexico.)
punctatus (COBB)
- Egg shell smooth; tooth apex in 24–28% of buccal cavity. — ♀: $L = 1.8-2.5$ mm; $a = 26-33$; $b = 3.3-4.4$; $c = 10-18$; $V = 57-67\%$. ♂: $L = 2.2$ mm; $a = 36-37$; $b = 4.0-4.1$; $c = 18-20$. (Holland, Federal Republic of Germany, Democratic Republic of Germany, Austria, Hungary, Poland, Spain, France, Italy, Yugoslavia, Denmark, Sweden, Canary Islands, Egypt, Mauritius, Zaire, Kenia, India, Mongolia, China, Hainan, Soviet Union [Far East], Canada, United States [California, Florida], St. Lucia, Dominica, Brazil, New Zealand.)
muscorum (DUJARDIN)

Prionchulus auritus n. sp.

(Fig. 3 A–D)

♀: $L = 2.2-2.4$ mm; $a = 30-32$; $b = 4.0-4.2$; $c = 13-14$; $V = 59-62\%$; $c' = 3.3-4.2$.

Body strongly bent ventrally. Cuticle smooth, 2.3–3 μ m thick on mid-body region. Head 43–45 μ m wide, lips separate, labial papillae conoid and protruding, especially the posterior ones which are ear-like (hence the name “auritus”). Amphid with slit-like opening, level with anterior end of mouth cavity.



Figs. 3 A–D. *Prionchulus auritus* n. sp. A: anterior end (100 \times); B: female genital organ (210 \times); C–D female tails (400 \times)

Buccal cavity large, $46-48 \times 26-27 \mu\text{m}$ ($55-56 \mu\text{m}$ long from anterior margin of head), its wall moderately thick. Dorsal tooth strong with apex situated in $19-20\%$ of buccal cavity ($9-10 \mu\text{m}$ from beginning of the latter), opposed by two longitudinal ribs provided with small denticles, $9-10$ on each. Oesophagus $560-590 \mu\text{m}$ long, heavy muscular, its posterior end not tuberculate. Excretory pore small but visible, $190-200 \mu\text{m}$ from head, or in $33-35\%$ of oesophagus length, respectively. Rectum somewhat shorter than anal body diameter. The intestine was empty in every animal.

Vulva with small, $6-7 \mu\text{m}$ long cuticularized knobs. Vagina about $2/5$ as long as corresponding body width. Female genital organ paired, comparatively short (Type I); anterior gonad $3.4-4.6$ times as long as body diameter, $11-13\%$ of body length, posterior gonad $3.7-5.2$ times as long as body diameter, $12-14\%$ of body length. There were no eggs in the uterus.

Distance between vulva and anus $4-4.6$ times as long as tail. This latter $160-180 \mu\text{m}$, $3.3-4.2$ times anal body diameter, strongly curved ventrally with finely rounded tip.

Male unknown.

Brief characteristics: Body of medium size, labial papillae strong, ear-like, mouth cavity large, subventral denticles $9-12$ in each row, excretory pore conspicuous, gonads short, tail strongly bent.

Holotype: ♀ on the slide No. A-9608 in the collection of the author.

Type locality: Sri Lanka, Kandy, Nuwara Eliya, mosses from trunk in a rain forest, July 1968, leg. J. BALOGH & I. LOKSA.

Prionchulus auritus n. sp. resembles *P. spectabilis* (DITLEVSEN, 1912) ANDRÁSSY, 1958 in shape and strong development of the labial papillae. It can be distinguished from the latter by the shorter body (*spectabilis* $2.5-4.0$ mm long), the short female genital apparatus (in *spectabilis* the gonads are long, of type II), and the comparatively longer and not so sharply pointed tail.

MEYL (1955) described a male specimen under the name *Mononchus* (*Prionchulus*) *spectabilis* from the German shores which was, however, much shorter than the typical *spectabilis* and its spicules were also smaller, only half as long as those of *spectabilis*. CLARK (1960) regarded this nematode as a species inquirenda. Notwithstanding it is possible that MEYL's species is conspecific with *Prionchulus auritus* n. sp. (♂: $L = 1.5$ mm; $a = 21$; $b = 3.8$; $c = 24$; spicules $= 68 \mu\text{m}$; supplements 25 in number.)

REFERENCES

1. ALTHERR, E. & DELAMARE DEBOUTTEVILLE, C. (1972): Nématodes interstitiels des eaux douces des États-Unis d'Amérique (États de Washington, du Colorado et du Massachusetts) récoltés par Cl. Delamare Deboutteville. — Ann. Spéleol., 27: 683-760.
2. ANDRÁSSY, I. (1959): Nematoden aus dem Psammon des Adige-Flusses, I. — Mem. Mus. Civ. Stor. Nat. Verona, 7: 163-181.
3. BASTIAN, H. C. (1865): Monograph on the Anguillulidae, or free nematoids, marine, land, and freshwater; with descriptions of 100 new species. — Tr. Linn. Soc. London, 25: 1-248.
4. BRAKENHOFF, H. (1913): Beitrag zur Kenntnis der Nematodenfauna des nordwestdeutschen Flachlandes. — Abhandl. Naturw. Ver. Bremen, 22: 1-22.
5. CLARK, W. C. (1960): Redescription of *Mononchus truncatus* Bastian, *M. papillatus* Bastian and *Prionchulus muscorum* (Dujardin) (Enoplida, Nematoda), — Nematologica, 5: 184-198.

6. COBB, N. A. (1893): Nematodes, mostly Australian and Fijian. — Macleay Mem. Vol. Linn. Soc. N. South Wales: 252—308.
7. COBB, N. A. (1916): Subdivisions of Mononchus. — Journ. Parasitol., 2: 195—196.
8. COBB, N. A. (1917): The mononchs (Mononchus Bastian, 1866). A genus of free-living predatory nematodes. — Soil Sci., 3: 431—486.
9. COETZEE, V. (1968): Southern African species of the genera Mononchus and Prionchulus (Mononchidae). — Nematologica, 14: 63—76.
10. DADAY, J. (1897): Die freilebenden Süsswasser-Nematoden Ungarns. — Zool. Jahrb. Syst., 10: 91—134.
11. DITLEVSEN, H. (1912): Danish freeliving nematodes. — Vid. Medd. Dansk. Naturh. Foren. København, 63: 213—256.
12. DUJARDIN, F. (1845): Histoire naturelle des helminthes ou vers intestinaux. — Paris: 1—654.
13. EROSHENKO, A. S. (1972): Novye vidy khishchnykh nematod (Mononchidae) iz Primorskogo kraja. (New species of carnivorous Nematoda in the Maritime territory.) — Zool. Zhurn., 51: 13—20.
14. EROSHENKO, A. S. (1975): Desyat novykh vidov nematod otrjada Mononchida Jairajpuri, 1969, iz khvojnykh Primorskogo kraja. (Ten new nematode species of the order Mononchida Jairajpuri, 1969, from coniferous forests of Primorye.) — Gel'mintol. Issledov. Zhiv. Rast., 26: 152—169.
15. JAIRAJPURI, M. S. & KHAN, W. U. (1982): Predatory nematodes (Mononchida), with special reference to India. — New Delhi: 1—131.
16. KREIS, H. A. (1924): Die Seen im Aela- und Tinzendorfergebiet, II. — Jahresb. Naturf. Ges. Graubündens, 63: 23—68.
17. DE MAN, J. G. (1876): Onderzoekingen over vrij in de aarde levende Nematoden. — Tijdschr. Nederl. Dierk. Ver., 2: 78—196.
18. MEYL, A. H. (1955): Über einige an den deutschen Küsten vorkommende Arten der Nematodengattung Mononchus Bastian, 1865. — Kieler Meeresforsch., 11: 80—85.
19. MICOLETZKY, H. (1914): Freilebende Süsswasser-Nematoden der Ost-Alpen mit besonderer Berücksichtigung des Lunzer Seengebietes. — Zool. Jahrb. Syst., 36: 331—546.
20. MULVEY, R. H. (1967): The Mononchidae: a family of predaceous nematodes. VI. Genus Mononchus (Nematoda: Mononchidae). — Canad. Journ. Zool. 45: 915—940.
21. MULVEY, R. H. (1967): The Mononchidae: a family of predaceous nematodes. VII. Genus Prionchulus (Nematoda: Mononchidae). — Canad. Journ. Zool. 45: 941—953.
22. MULVEY, R. H. (1978): Predaceous nematodes of the family Mononchidae from the Mackenzie and Porcupine river system and Somerset Island, N. W. T., Canada. — Canad. Journ. Zool., 56: 1847—1868.
23. MULVEY, R. H. & JENSEN, H. J. (1967): The Mononchidae of Nigeria. — Canad. Journ. Zool. 45: 667—727.
24. PAX, F. & Soós, Á. (1943): Die Nematoden der deutschen Schwefelquellen und Thermen. — Arch. Hydrobiol., 40: 123—183.
25. SCHNEIDER, W. (1925): Freilebende Süsswassernematoden aus ostholsteinischen Seen. Nebst Bemerkungen über die Nematodenfauna des Müritzer- und Schaalsees. — Arch. Hydrobiol., 15: 536—584.
26. SKWARRA, E. (1921): Diagnosen neuer freilebender Nematoden Ostpreussens. — Zool. Anz., 53: 66—74.
27. SONI, G. R. & NAMA, H. S. (1983): Mononchus sinensis n. sp. (Nematoda: Mononchidae) from India. — Curr. Sci., 52: 75—76.
28. STEFANSKI, W. (1914): Recherches sur la faune des nématodes libres du Bassin du Léman. — Thèse, Genève: 1—72.

29. THORNE, G. (1929): *Nematodes from the summit of Long's peak, Colorado.* — Trans. Amer. Microsc. Soc., 48: 181—195.
30. TYSOWSKI, A. (1915): *Wolnozijace nicienie (nematodes) zebrane w powiecie sokalskim.* — Rozpr. Wiadom. Muz. Dziedusz., 1: 65—92.
31. WILLIAMS, J. R. (1958): *Studies on the nematode soil fauna of sugar cane fields in Mauritius;*
1. The genus *Mononchus* (Trilobidae, Enoplida). — Mauritius Sugar Ind. Res. Inst. Occ. Pap., 1: 1—13.